

Submission under 37 C.F.R. §1.114
Application No. 09/783,598
Attorney Docket No. 010153

REMARKS

Rejections under 35 USC §103(a)

Claims 1, 3 and 5 were rejected under 35 USC §103(a) as being obvious over Beilin et al. (U.S. Patent No. 5,916,453) in view of Albrecht et al. (U.S. Patent No. 4,968,585), and further in view of Ho et al. (U.S. Patent No. 5,459,368).

Claim 1 has been amended to recite “a plurality of posts extending through said substrate, said posts formed of anisotropically etched silicon, and each of the posts having an electrically conductive portion that has at least a first surface on one side of said substrate and a second surface on another side of said substrate.”

According to Beilin et al, the apertures are filled with conductive material, but the side face of the posts is NOT covered by electrically conductive film. Also, Albrecht et al does not discuss covering of the posts by electrically conductive film so as to provide electrical contact between one side and the other side of the substrate.

In Ho et al, reference numeral (31) indicates “copper contact areas”; reference numeral (22) indicates “steep side walls”; and reference numeral (18) indicates a dielectric layer. The Examiner apparently assumes that reference (24), which indicates a conformal layer of a conductive barrier material as the electrically conductive film rather than reference numeral (22) indicating side walls. According to Ho et al, the interconnection (31) made of copper is covered

Submission under 37 C.F.R. §1.114
Application No. 09/783,598
Attorney Docket No. 010153

by a conformal layer (24) made of a material titanium nitride, which is **less conductive** than copper.

Therefore, the disclosure of Ho et al provides no suggestion or motivation to cover a side face of each of the posts by electrically conductive film so as to provide electrical contact between said one side and said other side of the substrate.

Thus, Beilin et al, Albrecht et al and Ho et al do not teach or suggest “a plurality of posts extending through said substrate, said posts formed of anisotropically etched silicon, and each of the posts having an electrically conductive portion that has at least a first surface on one side of said substrate and a second surface on another side of said substrate,” and “wherein a side face of each of said posts is covered by electrically conductive film so as to provide electrical contact between said one side and said other side of the substrate.”

For at least these reasons, claim 1 patentably distinguishes over Beilin et al and Albrecht et al.

Claims 4 and 6 were rejected under 35 USC §103(a) as being obvious over Beilin et al. (U.S. Patent No. 5,916,453) in view of Albrecht et al. (U.S. Patent No. 4,968,585), and further in view of Onishi et al. (U.S. Patent No. 5,459,368).

Claims 4 and 6, both directly depending from claim 1, also patentably distinguish over Beilin et al and Albrecht et al for at least the same reasons.

Submission under 37 C.F.R. §1.114
Application No. 09/783,598
Attorney Docket No. 010153

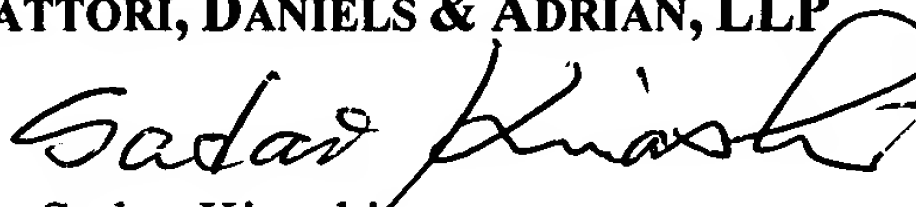
Onishi et al is cited for allegedly disclosing an electronic device mounted on a pad of a substrate. Such disclosure, however, does not remedy the deficiencies of Beilin et al and Albrecht et al.

For at least these reasons, claims 4 and 6, patentably distinguish over Beilin et al, Albrecht et al and Onishi et al.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Sadao Kinashi

Attorney for Applicants

Registration No. 48,075

Telephone: (202) 822-1100

Facsimile: (202) 822-1111

SK/ar